FORESTIERA GODFREYI (OLEACEAE), A NEW SPECIES FROM FLORIDA AND SOUTH CAROLINA

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ABSTRACT

Forestiera godfreyi (Oleaceae) is formally described and illustrated. The new species has previously been confused with *F. acuminata* and *F. pubescens;* comparions amongst the three are given.

Several populations of pubescent *Forestiera* in northern Florida and one in South Carolina have been difficult to place taxonomically. Johnston (1957) included them in *F. acuminata* (Michx.) Poir. in Lam. forma *vestita* (Palmer) M. C. Johnst. Typical glabrous forms of *F. acuminata* occur in our area mostly on river banks, in swampy woodlands, and on pond or lake shores, whereas the pubescent plants occur on bluffs and high hammocks underlain by limestone as well as differing morphologically. In her dissertation, Brooks (1977) included these plants in *F. pubescens* Nutt., a species from limestone hills in Oklahoma, Texas, and New Mexico. She suggested floral characters of our plants were more like those of *F. pubescens* than like those of *F. acuminata.*

R. K. Godfrey provided me additional collections and field observations incidental to his work on the trees and shrubs of north Florida. He and I believe these pubescent plants are more closely related to *F. acuminata* than to *F. pubescens* but that they are distinct from both those species. Therefore, I am describing a new species to accommodate them.

FORESTIERA **godfreyi** L. C. Anderson, sp. nov.

Frutices vel arbusculae deciduae dioeciae; rami novelli petioli et folia pubescentia; folia opposita ovata vel elliptica apice obtusa 5 – 8 cm longa 2.3 – 4 cm lata; flores in fasciculi umbellati redactissimi pedunculis et pedicellis pubescentibus dispositae; staminatae apetalae staminibus 2 – 5, 2.1 – 4 mm longis; pistillatae apetalae staminibus abortivis 3 et pistillis 2.4 – 3.5 mm longis; drupa matura 8 – 12 mm longa 8 – 9 mm lata glauca caerulea.

Deciduous, dioecious shrubs or small trees 2.5 – 5 m tall, main stem arching or leaning, branches rigid or divaricate, occasionally a few branchlets (5 – 7 cm long) developing enlarged bases to become spine-like, young twigs pubescent; leaves opposite, simple, ovate to lance-ovate or

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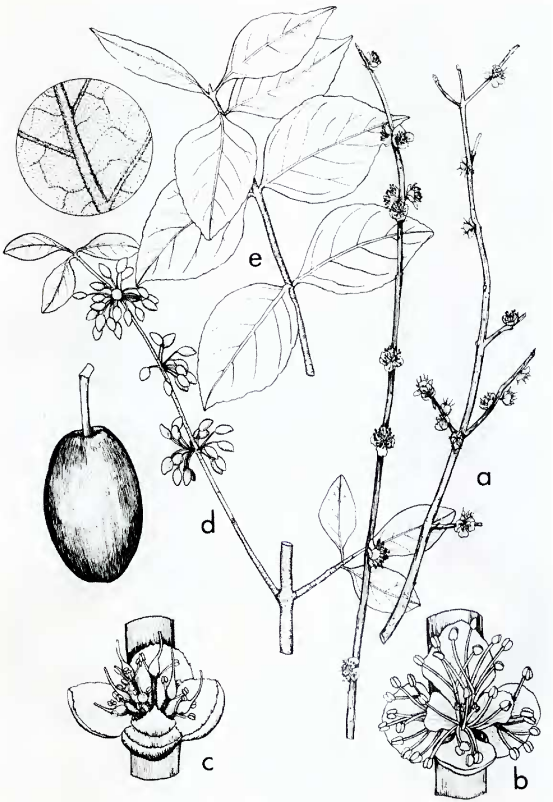

Fig. 1. *Forestiera godfreyi:* a., flowering branches, staminate on left, functionally pistillate on right; b., cluster of staminate flowers; c., cluster of functionally pistilate flowers; d., fruiting branch with immature fruits, mature fruit enlarged to left; e., branch of mature leaves (short petiolate), with enlarged portion of abaxial surface to left.

West & L. E. Arnold in 1937, fl (FLAS); JACKSON CO.: Florida Caverns State Park, *L. E. Arnold & E. West* in 1948, veg (FLAS), *R. K. Godfrey 78536*, veg (FLAS, FSU, US, USCH), *R. K. Godfrey 78480a*, veg (FSU), *R. K. Godfrey 79326*, fl (staminate: A, FSU, GA, MO, NY); JEFFERSON CO.: E side Lake Miccosukee, *R. K. Godfrey 73268*, fr (FLAS, FSU-2 sheets, MO), *78375*, fl (staminate and pistillate: A, FSU, MO, NY, TEX, US; pistillate only: GA, NCU), *78572*, fr (FSU); LEON CO.: Lake Miccosukee, *E. J. Palmer 38464*, veg (MO); LEVY CO.: 5 mi NE Inglis, *L. E. Arnold s.n.*, veg (FLAS); LIBERTY CO.: Apalachicola River, S of Long Creek, *R. K. Godfrey & A. Gholson 79840*, veg (FLAS, FSU), *S. W. Leonard et al. 7827*, fr (FSU), Torreya State Park, *P. Elliott 267*, veg (FSU), *R. K. Godfrey & A. Gholson 79648*, fr (FLAS, FSU); *Marion Co.*: Silver River, *R. W. Simon* in 1984, fr (FSU). SOUTH CAROLINA. BEAUFORT CO.: Bluffton, *J. H. Millichamp s.n.*, fr. (A).

Brooks (1977) lists the following collections that I have not seen that apparently belong to *F. godfreyi:* FLORIDA. HERNANDO CO.: 13 m NE of Brooksville, *J. D. Smith 368* (GH, NY, US); COUNTY UNKNOWN: Tampa Bay, *Leavenworth s.n.* (GH, NY). SOUTH CAROLINA. BEAUFORT CO.: several Millichamp collections from near Bluffton.

Plants of *F. godfreyi* are less pubescent than those of *F. pubescens* but more so than those of *F. acuminata* forma *vestita*. They are also intermediate, yet distinctive, in several other features listed in Table 1, in which data from Brooks (1977) were used to supplement personal observations.

Structure of the inflorescences in *F. godfreyi* can perhaps best be described as a reduced umbel; it is a very highly reduced umbel or cyme in *F. pubescens* and a thyrse in *F. acuminata*. The new species is separated from the other two fairly well phenologically; it blooms from mid-January to mid-February, and the other two bloom in February and March. *Forestiera godfreyi* fruit matures in late April or early May, whereas fruits of the other two mature in May and June (occasionally in late April for *F. acuminata).*

Mature fruits of *F. godfreyi* are dark blue with smooth surfaces, whereas those of *F. acuminata* are reddish-purple with wrinkled surfaces (Godfrey, pers. comm.). Nuttall (1837) recorded *F. pubescens* fruit as black. Fruits of these three taxa also have distinctive sizes and shapes; measurements of dried fruits are given in Table 1 because those are represented on herbarium

TABLE 1. Comparison of vegetative and female floral features in selected *Forestiera* taxa.

FEATURE	F. ACUMINATA	F. GODFREYI	F. PUBESCENS
Maximum height, m	9	5	3
Leaf length, cm	(6)7 – 8(9)	(5)5.4 – 7(8)	(2.8)3.6 – 4.3(5)
Leaf width, cm	2 – 2.8(3.6)	(2.3)2.7 – 4	(1.3)1.5 – 1.6
Floral bract length, mm	5.5 – 6	3.8 – 4.1	2 – 3
Mature peduncle length, mm	8 – 11(14)	2.5 – 5	0 – 1(2)
Mature pedicel length, mm	1 – 2	5 – 7	4.5 – 6(10)
Flower number	9 – 23(27)	(5)7 – 10	5 – 15
Fruit length, dry, mm	11 – 12	8 – 9	6 – 7
Fruit width, dry, mm	3 – 4(5)	4 – 5	3.5 – 4

specimens. Fresh fruit sizes are given by Brooks (1977) for *F. acuminata* and *F. pubescens* and here in the species description for *F. godfreyi*.

Calyx development in *F. godfreyi* flowers appears to be more extensive than in the other taxa. Certainly, additional populations should be examined for enlarged, petaloid sepals as found in *Godfrey 79326;* staminate flowers of *Godfrey 78375, Hall 1270,* and *Murrill* in 1940 lack them.

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